

REMARKS

Claims 1, 2, 6-8, 10, and 13-18 are all the claims currently pending in the present Application.

Claim Amendment

With this Amendment, Applicants amend Claim 1, as shown. No new matter is added. Applicants submit that this amendment is supported at least at page 13, lines 17-22 of the Specification.

Claim Rejections

The current claim rejections are as follows:

- Claims 1, 2, 6, 7 and 10 as unpatentable over Kondo et al., “Fabrication Of Long-Period Fiber Gratings By Focused Irradiation Of Infrared Femtosecond Laser Pulses,” Optics Letters, Vol. 24, No. 10, May 15, 1999 (“Kondo”), in view of Bilodeau et al., U.S. Patent No. 5,495,548 (“Bilodeau”);
- Claim 8 as unpatentable over Kondo, in view of Bilodeau and Kircher, U.S. Patent No. 4,537,469 (“Kircher”);
- Claim 13 as unpatentable over Kondo, in view of Bilodeau and Kershaw, U.S. Patent No. 6,154,591 (“Kershaw”);
- Claim 14 as unpatentable over Kondo, in view of Bilodeau and Koops et al., U.S. Patent No. 5,982,962 (“Koops”);
- Claim 15 as unpatentable over Kondo, in view of Bilodeau and Starodubov, U.S. Patent No. 5,881,188 (“Starodubov”);
- Claim 16 as unpatentable over Kondo, in view of Bilodeau and Modavis et al., U.S. Patent No. 5,647,040 (“Modavis”);
- Claim 17 as unpatentable over Kondo, in view of Bilodeau and Albrecht et al., WO 99/52003 (“Albrecht”), which corresponds to U.S. Patent No. 6,591,034; and
- Claim 18 as unpatentable over Kondo, in view of Bilodeau and Komatsu, U.S. Patent No. 6,192,170.

Regarding Claim 1, Applicants submit that Kondo teaches changing a refractive index by irradiation by light from a laser. Kondo fails to explicitly teach or suggest the saturation of the refractive index via laser irradiation.

Bilodeau teaches the use of heat treatment for a period of time sufficient to increase the density of defects to saturate the refractive index. However, Bilodeau fails to explicitly teach removing the color center which is unstable in heat using a laser in the process of heat treatment.

Further, in Bilodeau, the color center is formed due to the increase of defects due to the thermal treatment, and the refractive index is saturated, including the natural extinction of the color center which is unstable in heat.

None of the cited references teaches or suggests the removal of the color center which is unstable in heat via irradiation by a laser. Therefore, no thermal treatment is necessary in the present invention.

According to the present invention, the color center which is unstable in heat can be removed by the irradiation of a laser so that a stabilized saturation (for stabilizing modification of the refractive index) can be realized.

Therefore, in view of at least the above, Applicants submit that Claim 1 is patentable over the cited combination of Kondo and Bilodeau. Further, Applicants submit that none of Kircher, Kershaw, Koops, Starodubov, Modavis, Albrecht, Komatsu, Albert, Scifres, or Katayama remedy the above-discussed deficiencies in Kondo and Bilodeau, and therefore, Claims 2, 6-8, 10, and 13-18 are patentable at least by virtue of their dependence of Claim 1. Applicants

respectfully request that the rejections of Claims 1, 2, 6-8, 10, and 13-18 be reconsidered and withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

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23373

CUSTOMER NUMBER

Date: July 25, 2005